

2020-03-03 10:00:00

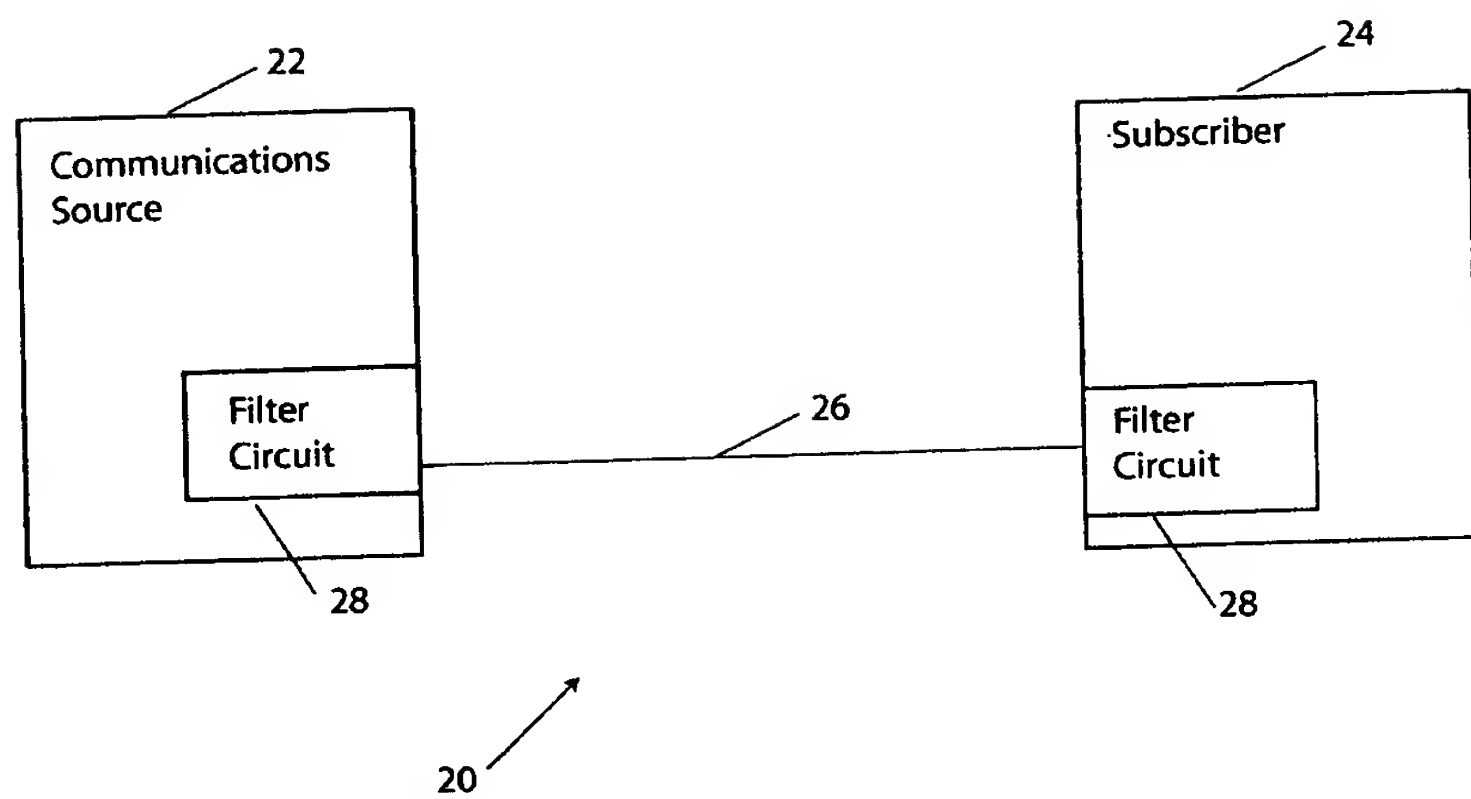


Fig. 1

Fig. 2A

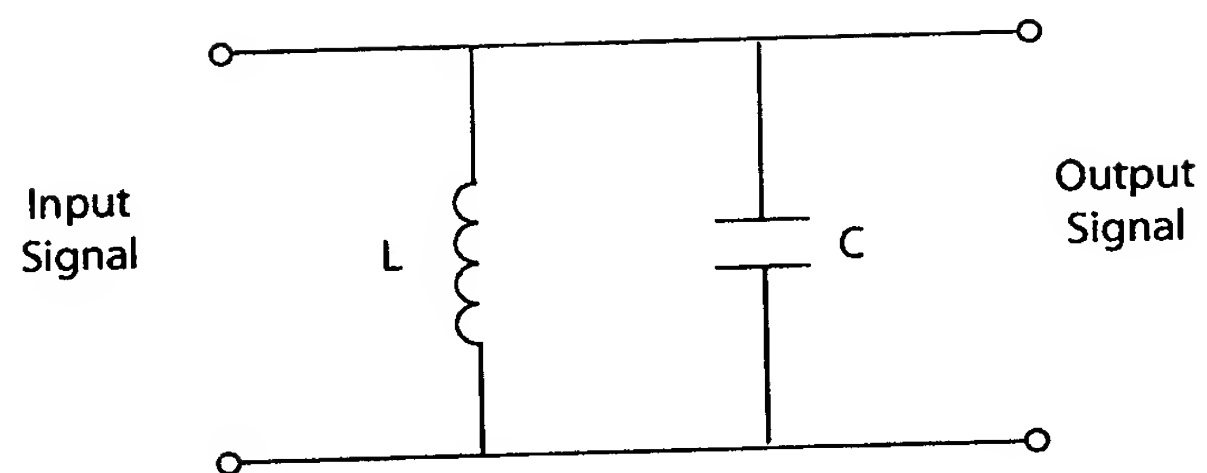
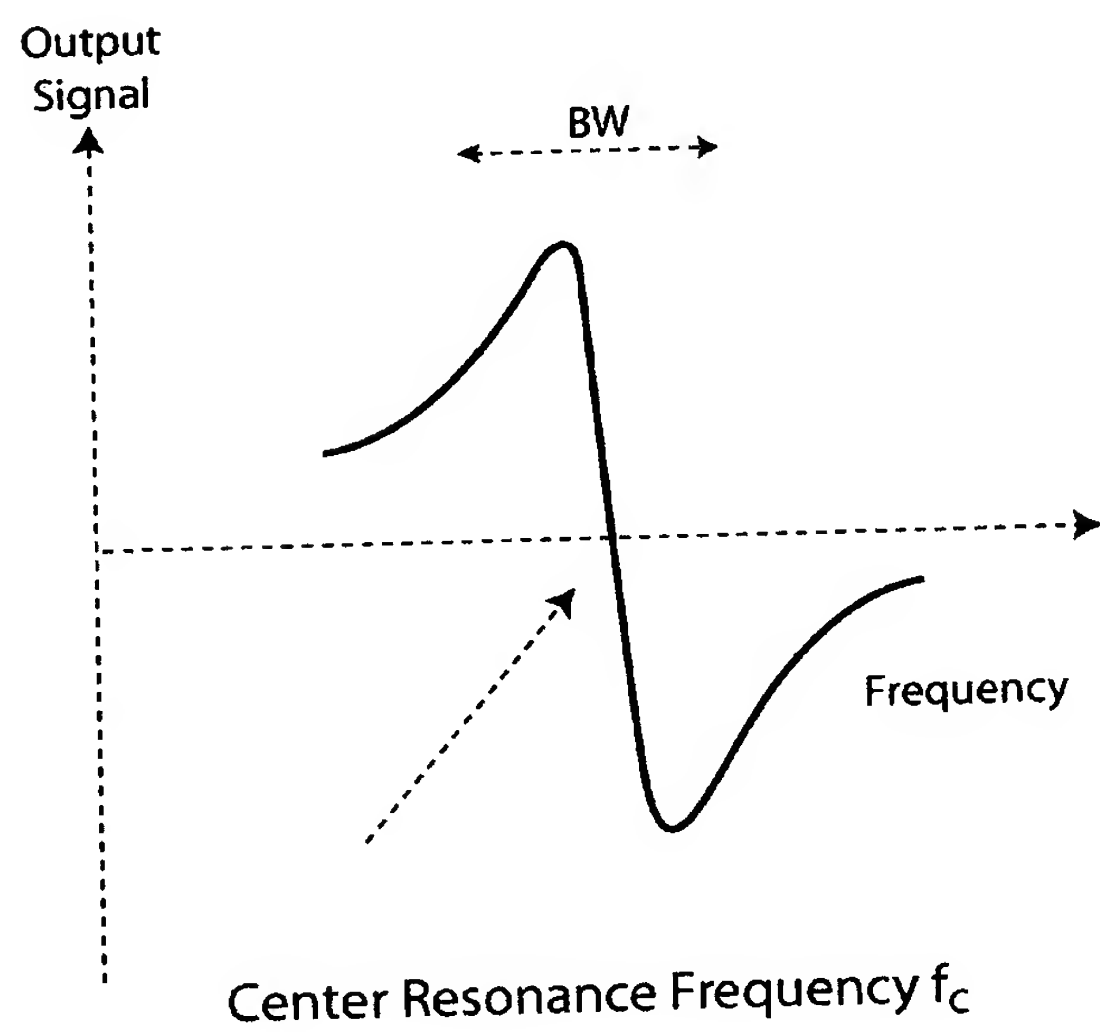


Fig. 2B



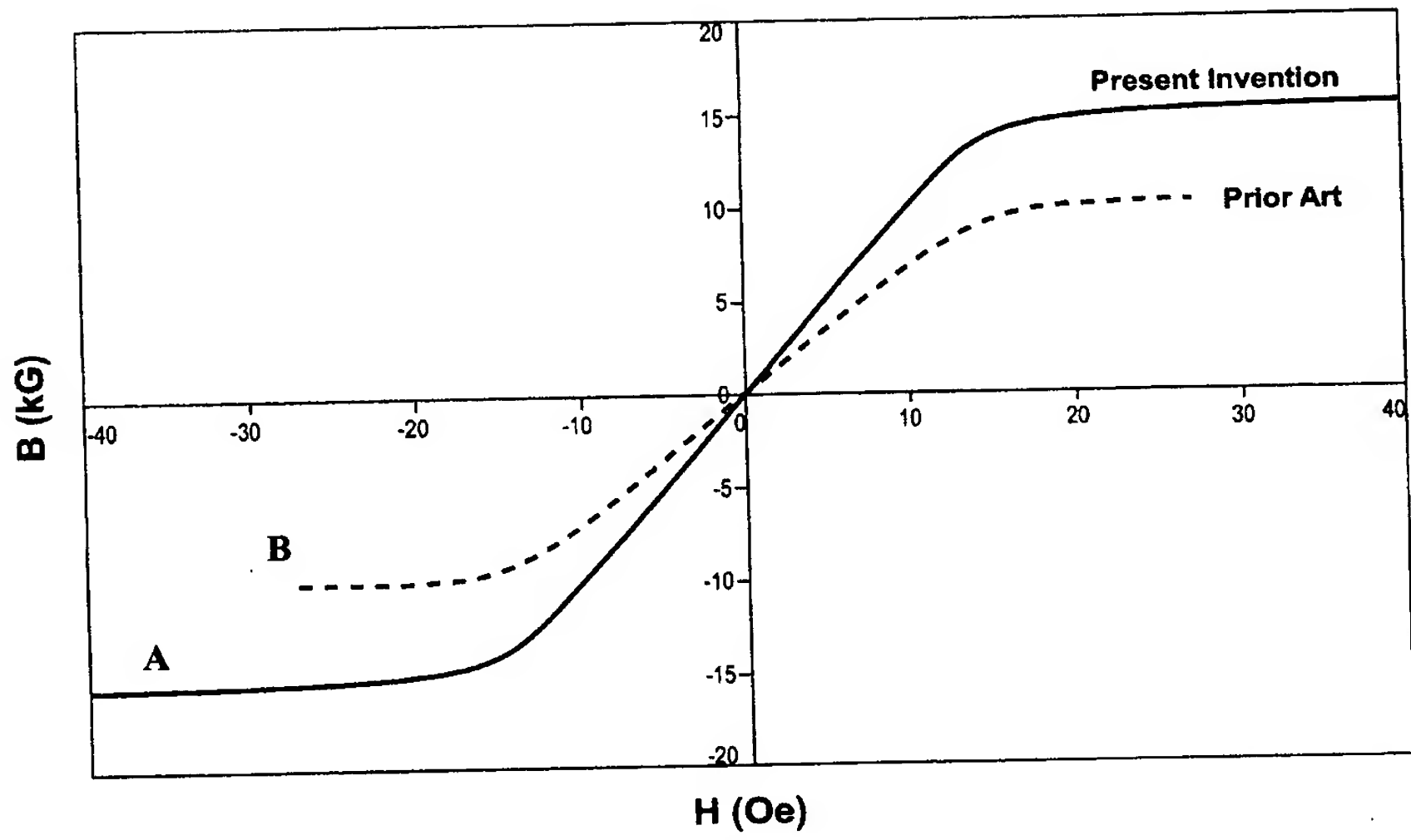


Fig. 3

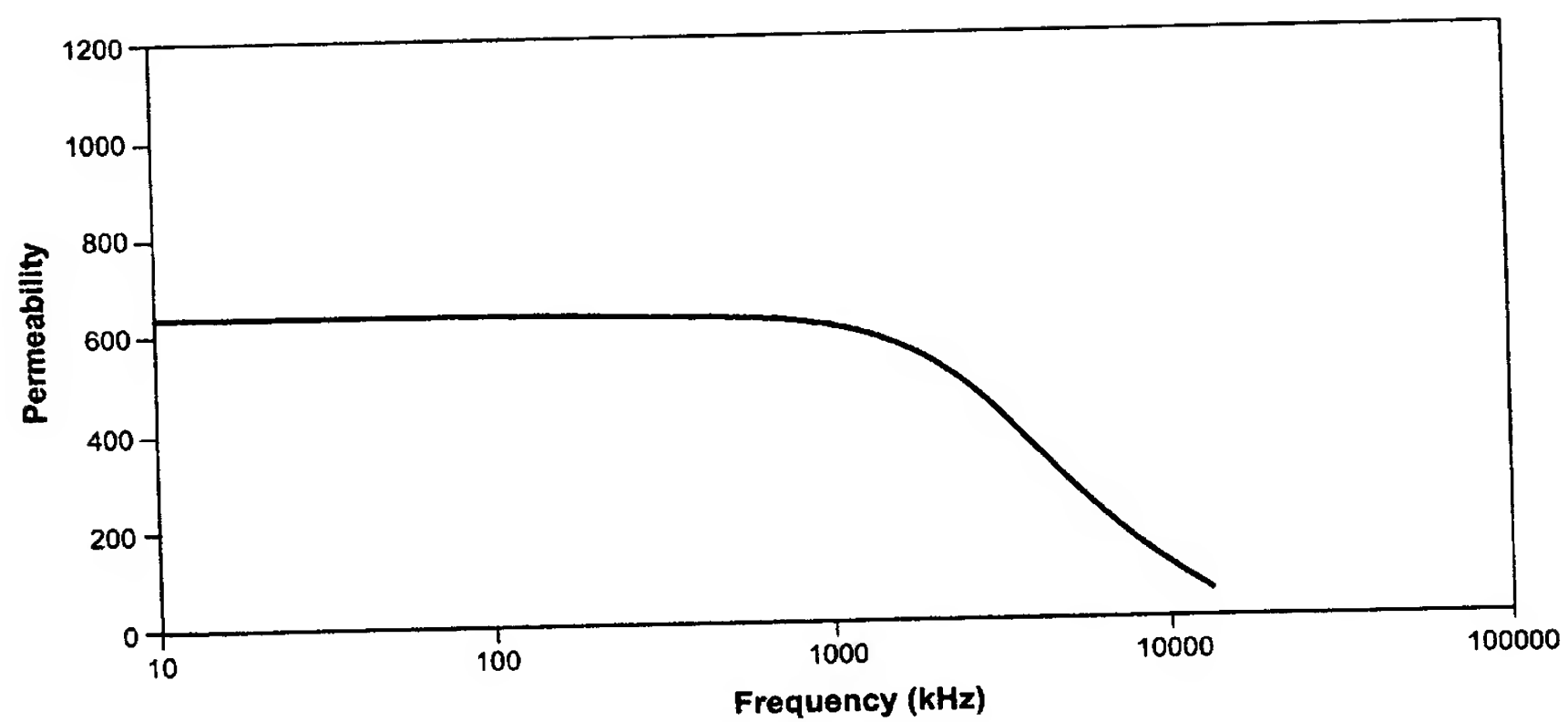


Fig. 4a

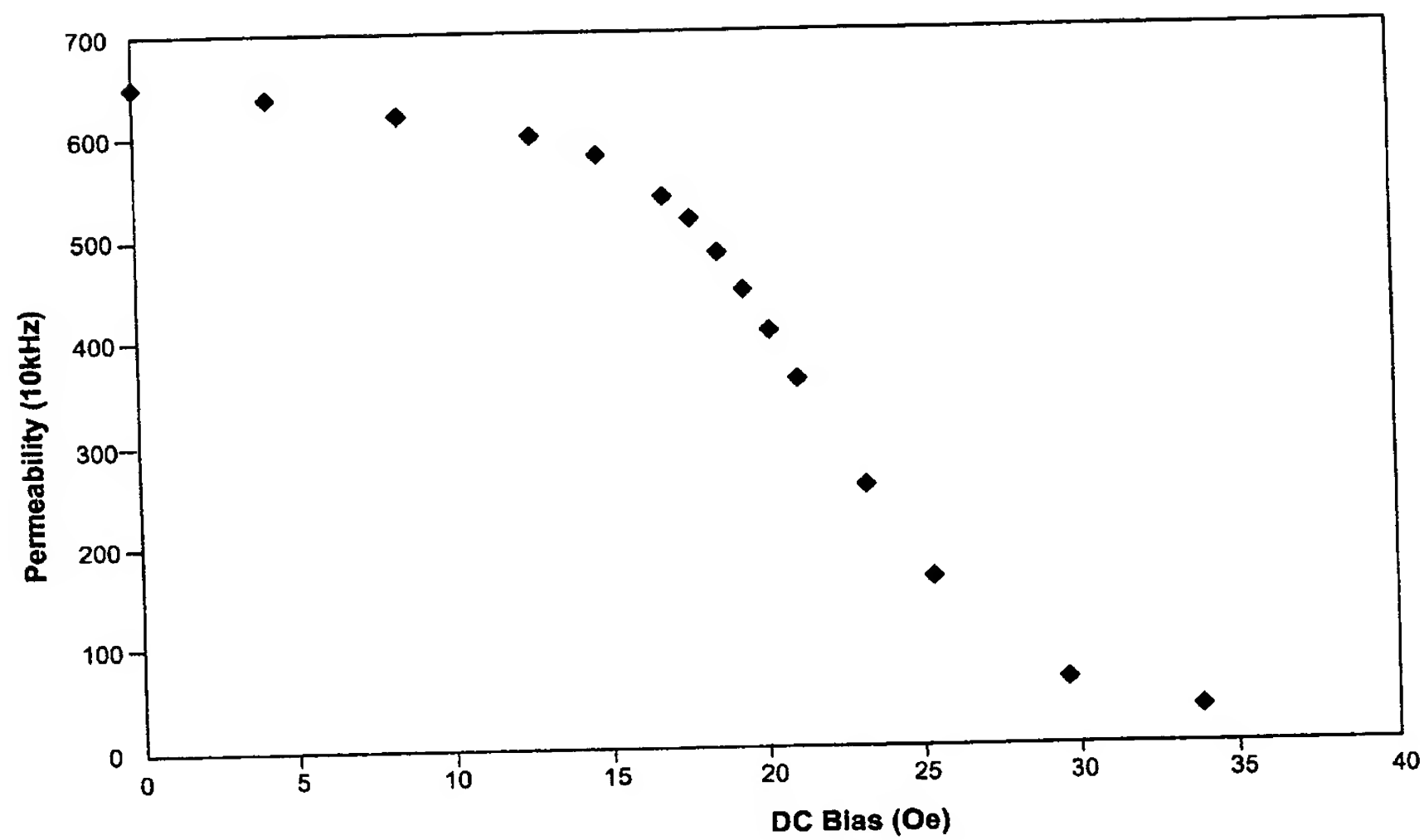


Fig. 4b

The graph plots Resonance Frequency Shift (Hz) on the y-axis (0 to 250) against DC Bias (Oe) on the x-axis (0 to 18). Two curves are shown: 'Prior Art' (dashed line) and 'Present Invention' (solid line). The 'Prior Art' curve shows a sharp increase in frequency shift starting around 9 Oe, reaching approximately 220 Hz at 10.5 Oe. The 'Present Invention' curve shows a more gradual, continuous increase, reaching approximately 165 Hz at 16 Oe.

DC Bias (Oe)	Prior Art (Hz)	Present Invention (Hz)
0	0	0
2	0	0
4	5	5
6	20	15
8	35	35
10	150	55
12	-	75
14	-	105
16	-	165

Fig. 5

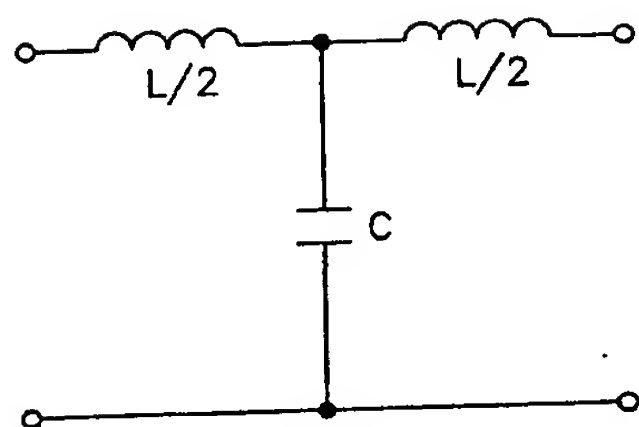


Fig. 6a

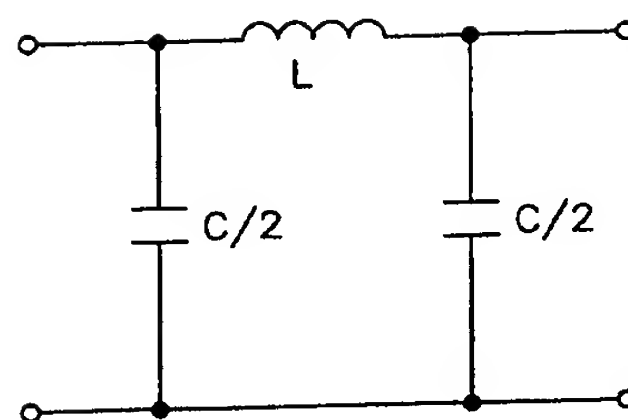


Fig. 6b

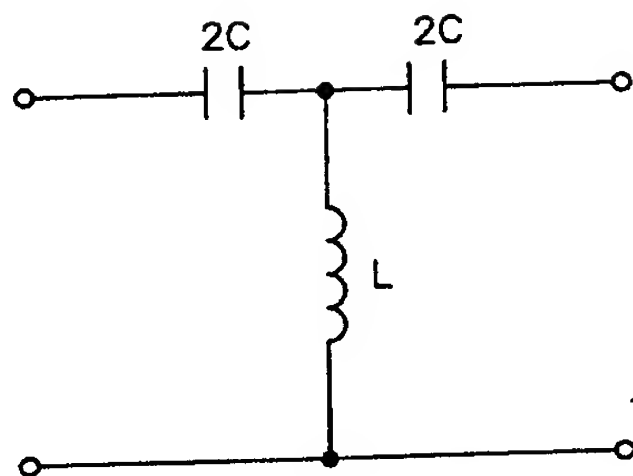


Fig. 6c

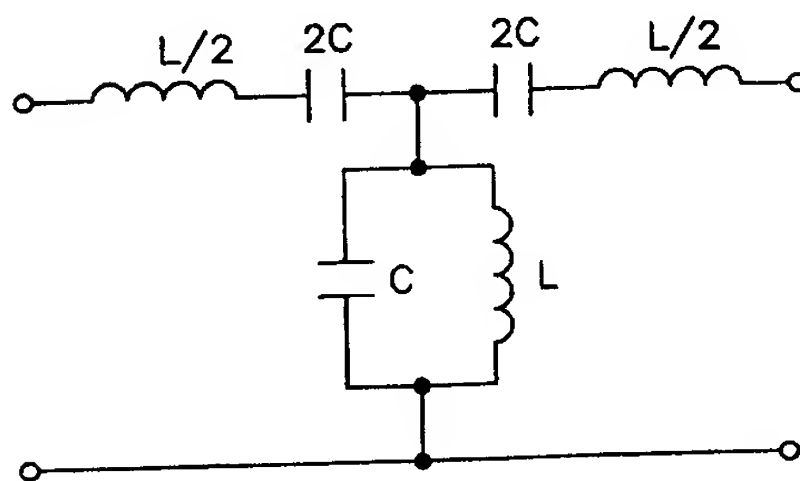


Fig. 6d

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Permeability vs Temperature

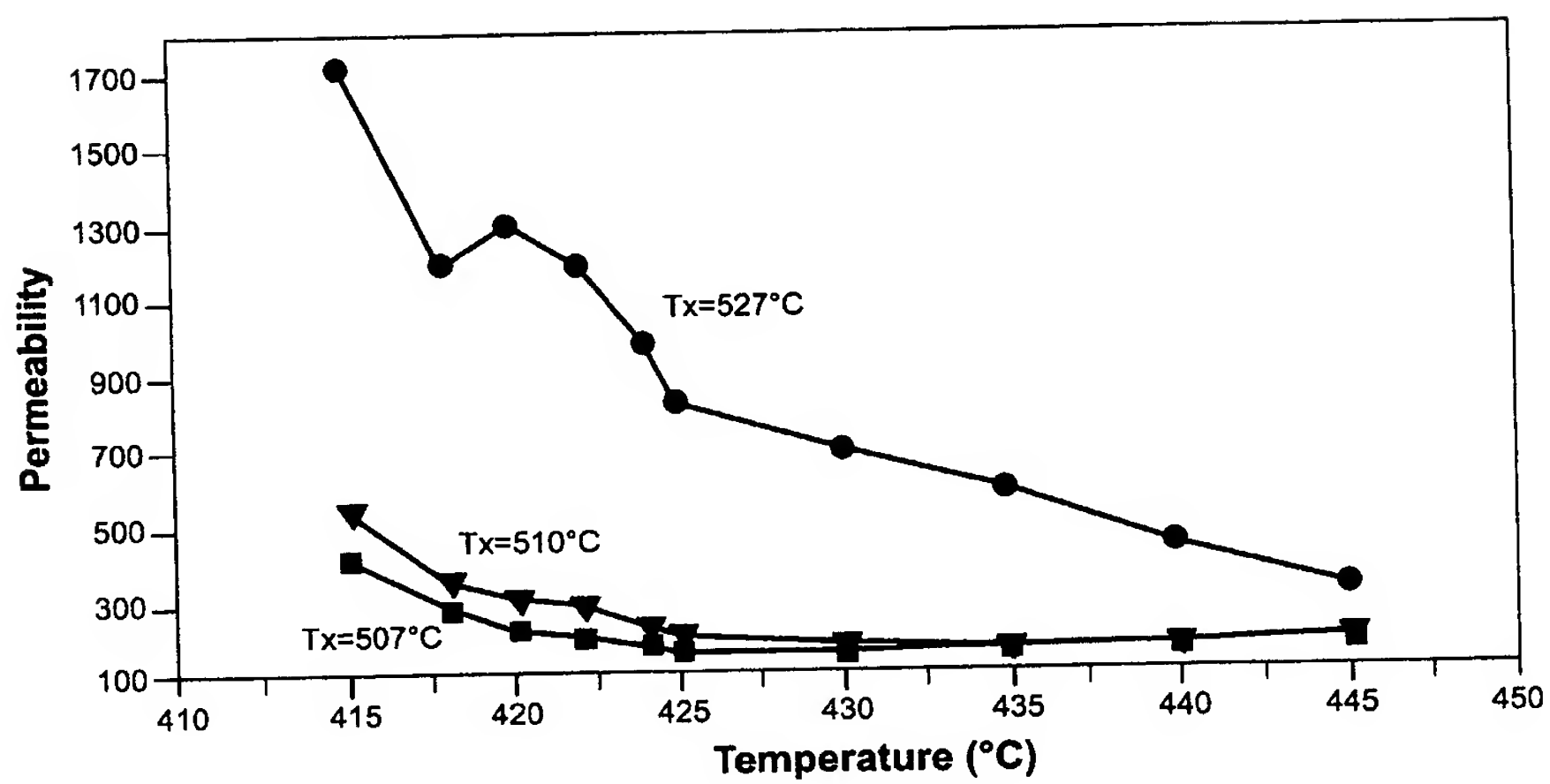


Fig. 7

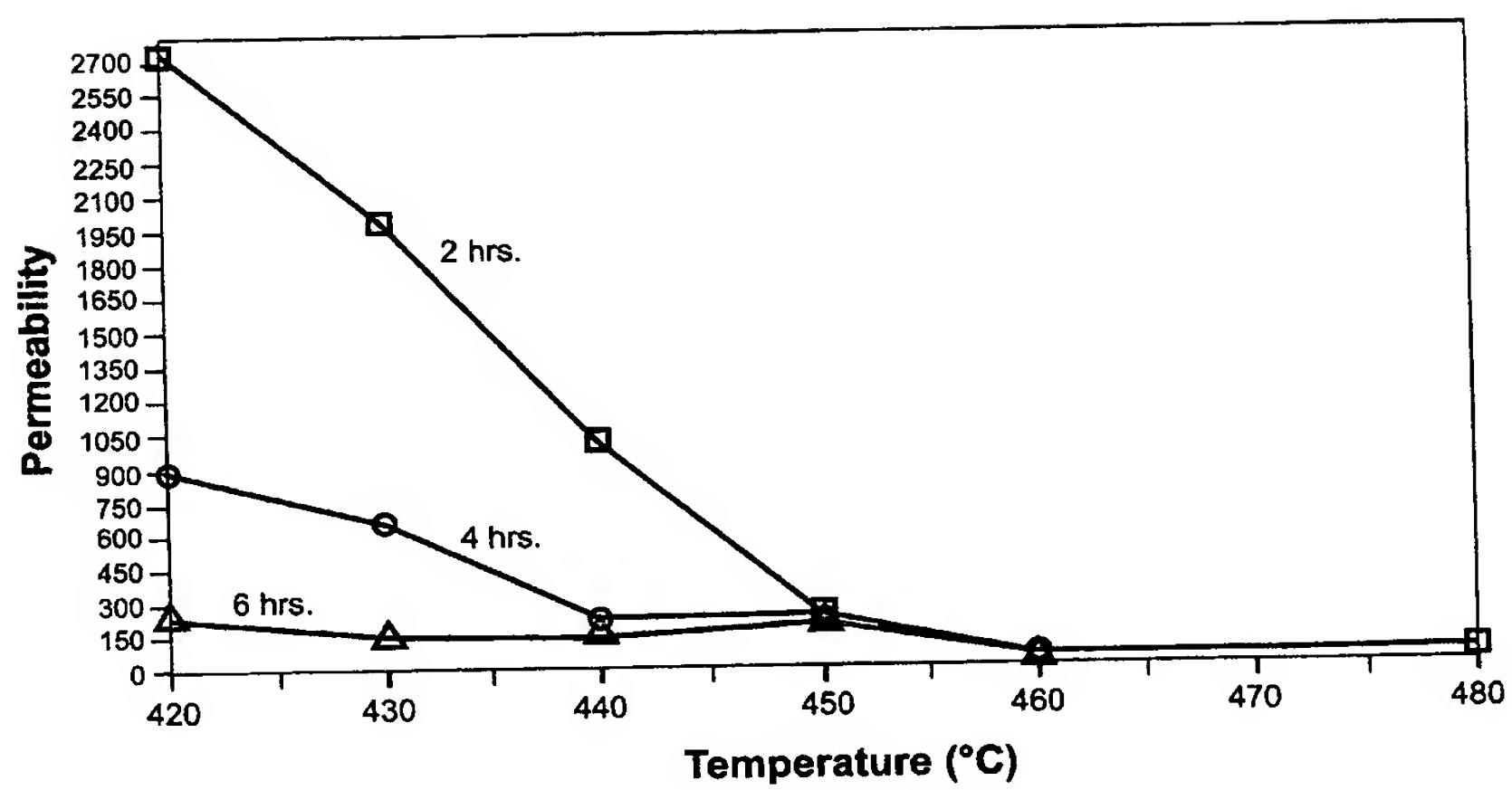


Fig. 8

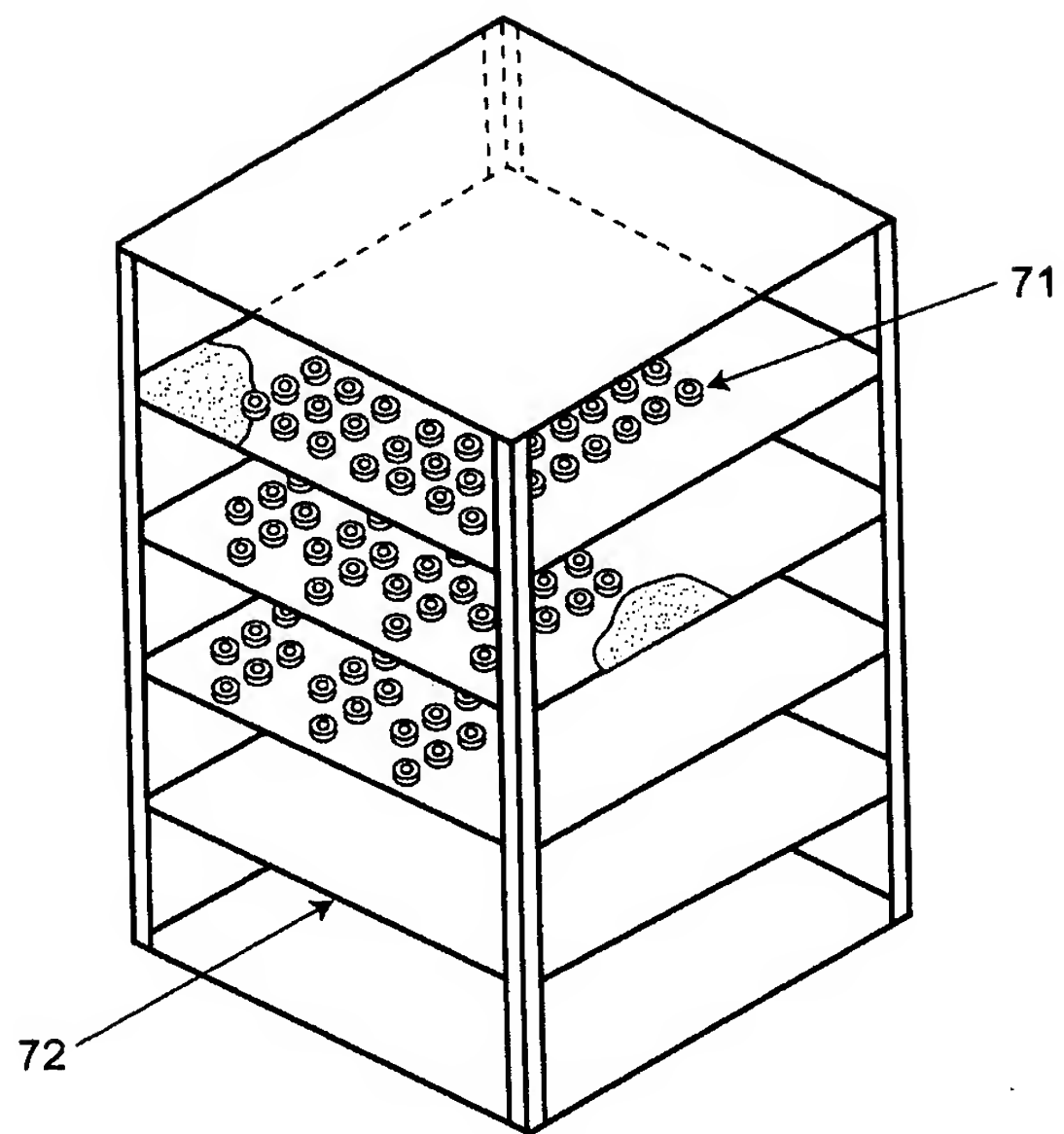


Fig. 9

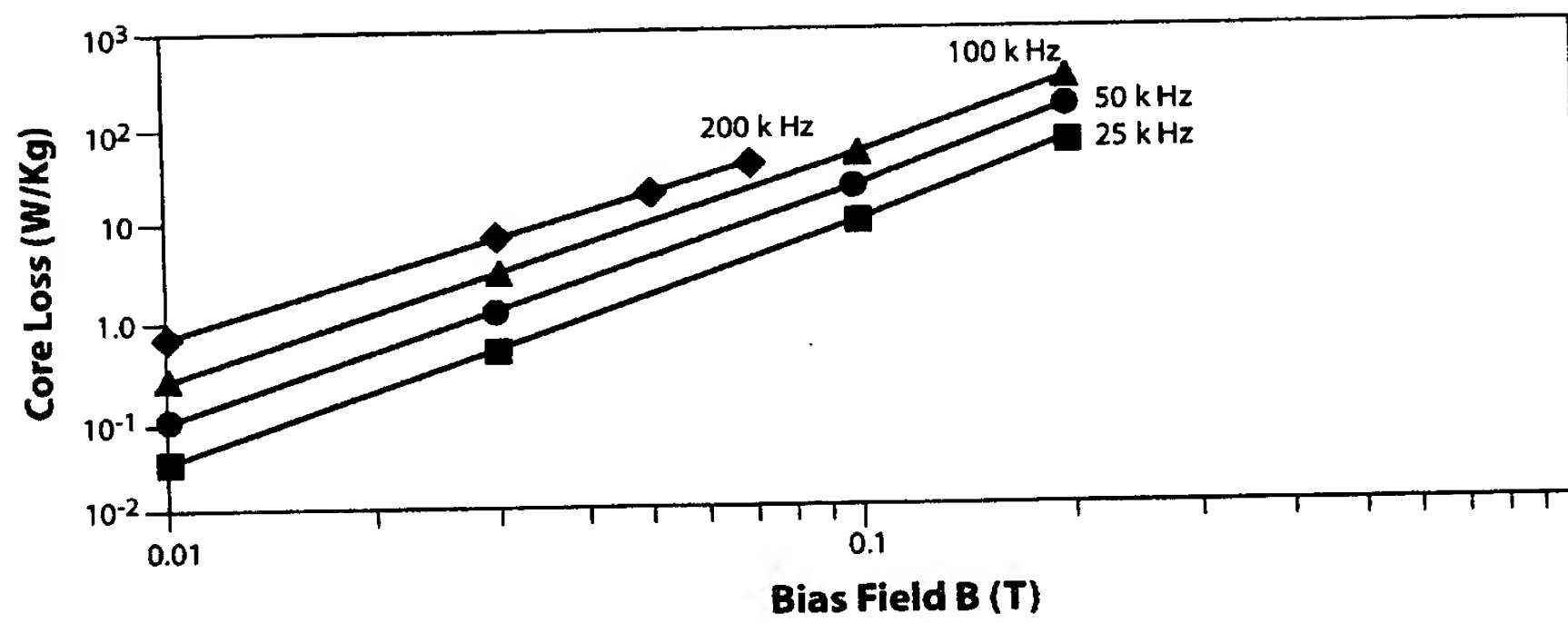


Fig. 10

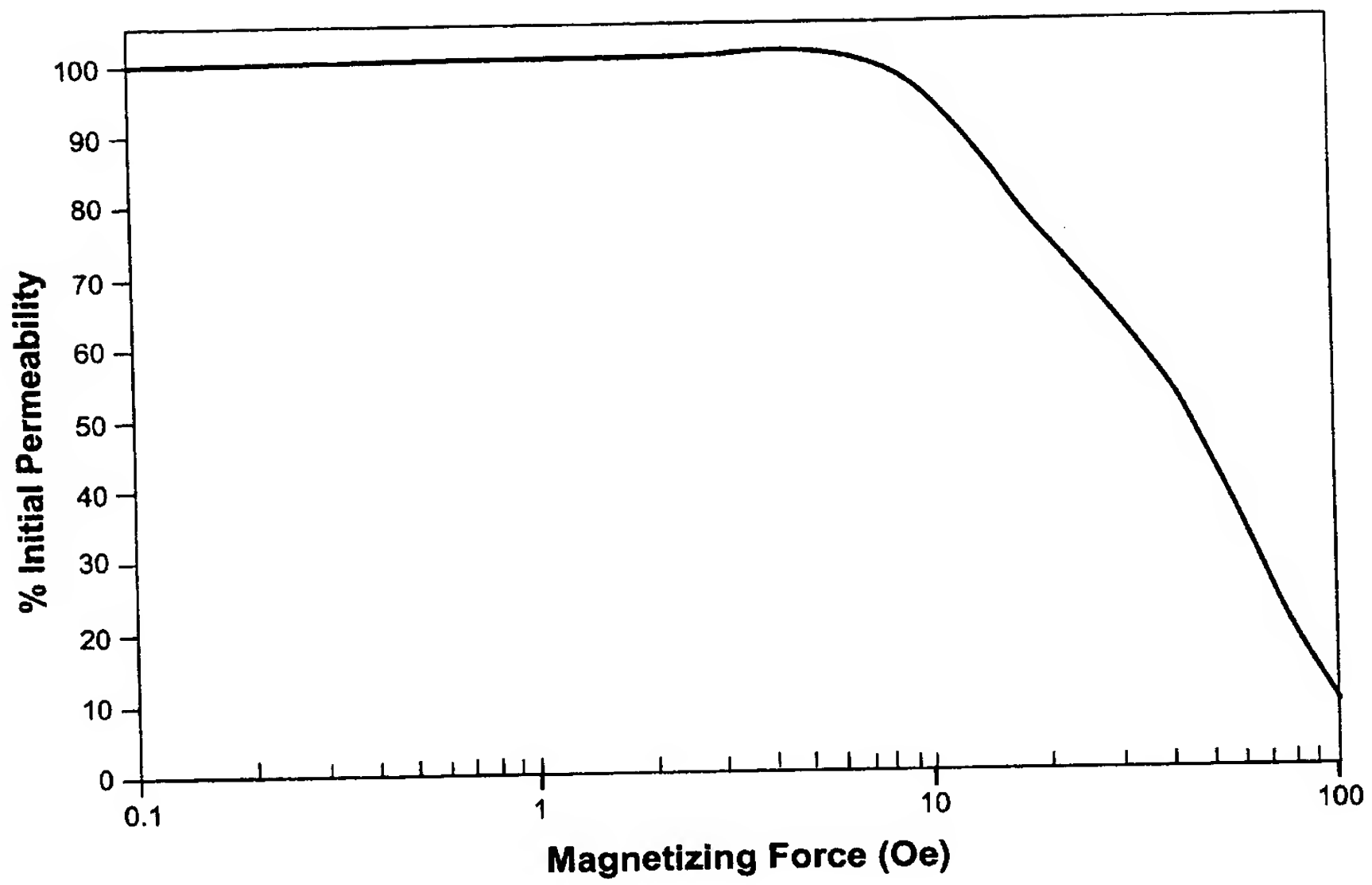


Fig. 11

200020-000000

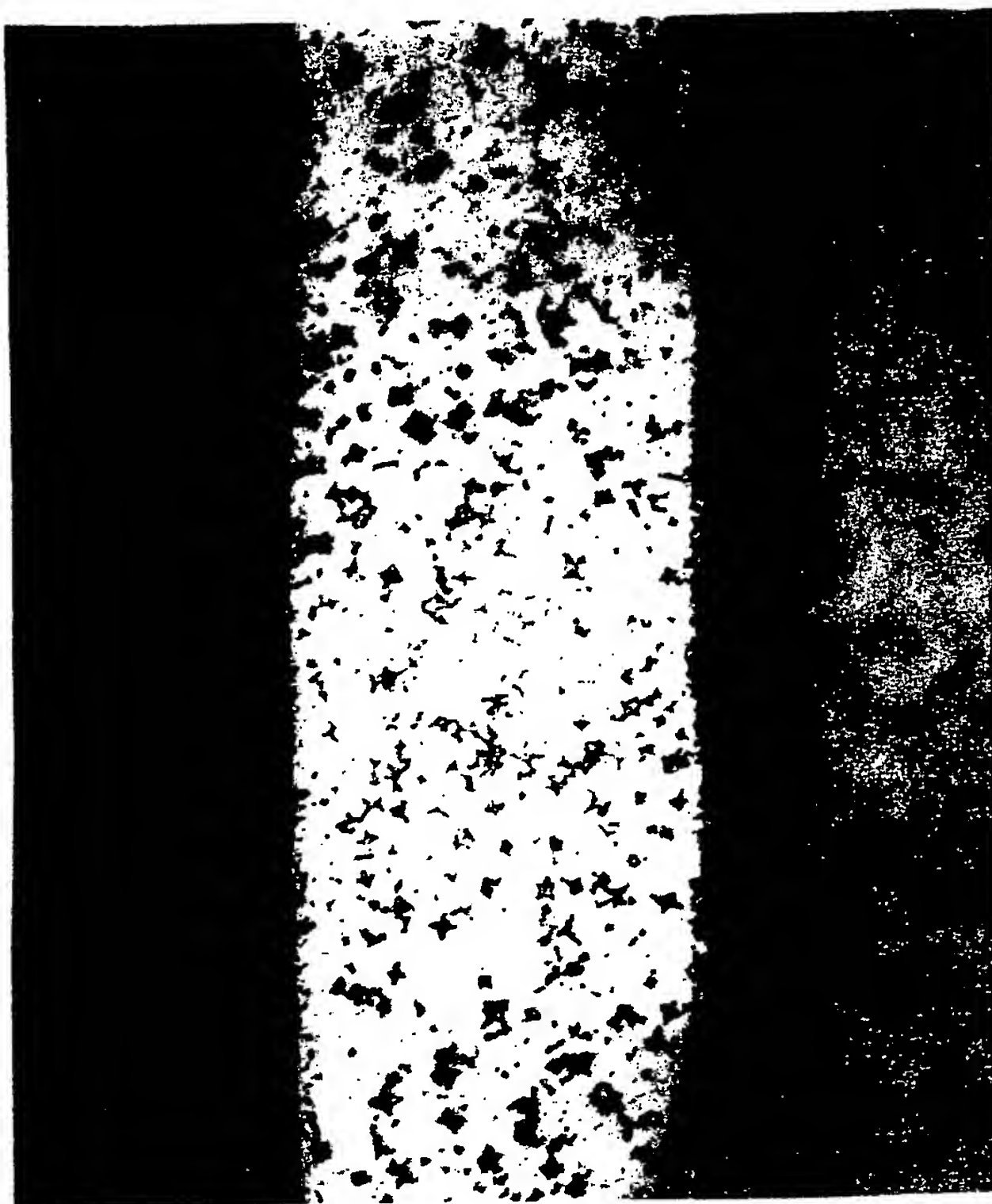


Fig. 12

A scatter plot showing the relationship between the Volume % of Crystalline Phase (X-axis) and Permeability (Y-axis) for polypropylene. The X-axis ranges from 0 to 30 with major ticks every 5 units. The Y-axis ranges from 0 to 400 with major ticks every 100 units. There are 8 data points plotted as solid black squares. The data points are approximately at (6.5, 335), (8.0, 385), (9.5, 255), (10.0, 195), (12.0, 220), (20.5, 185), (24.0, 145), and (28.5, 185). The permeability generally decreases as the volume percentage of the crystalline phase increases, with a notable drop between 10% and 20% crystallinity, followed by a slight increase at 28.5%.

Volume % of Crystalline Phase	Permeability
6.5	335
8.0	385
9.5	255
10.0	195
12.0	220
20.5	185
24.0	145
28.5	185

Fig. 13